CITY OF
HAYWARD
HEART OF THE BAY

Residential Energy Conservation Ordinance

Community Meeting
August 11, 2010

Development Services Department

What is a RECO?

Why a RECO?

Guiding Policy – Hayward Climate Action Plan

- Adopted by City Council on July 28, 2009
- Goal in CAP to Improve Energy Performance of Existing Buildings-
  - *reduce electricity consumption to 65% by 2050*
  - *reduce natural gas consumption to 50% by 2050*
- Action 3.1 Residential Energy Ordinance for single-family homes
  - Priority 11

Policy Context- State Goals

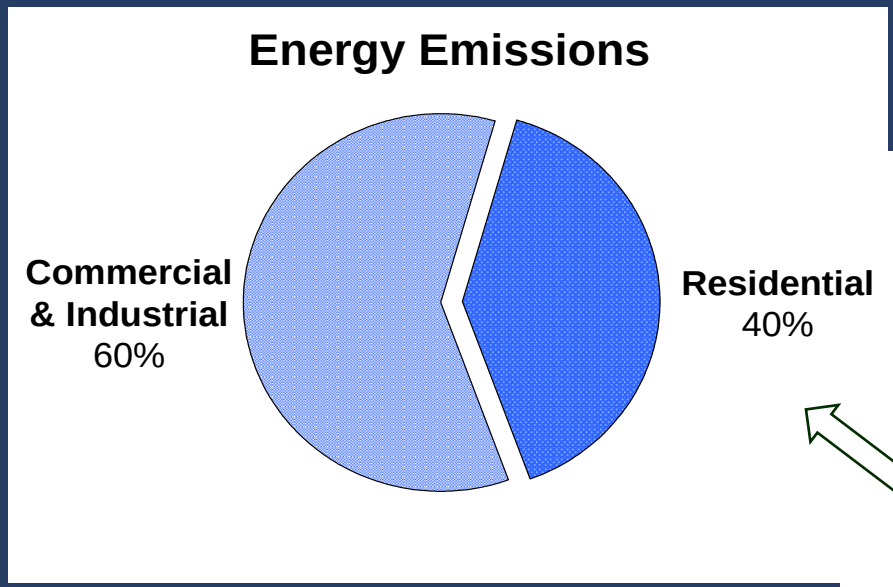
AB 32 The Global Warming Solutions Act

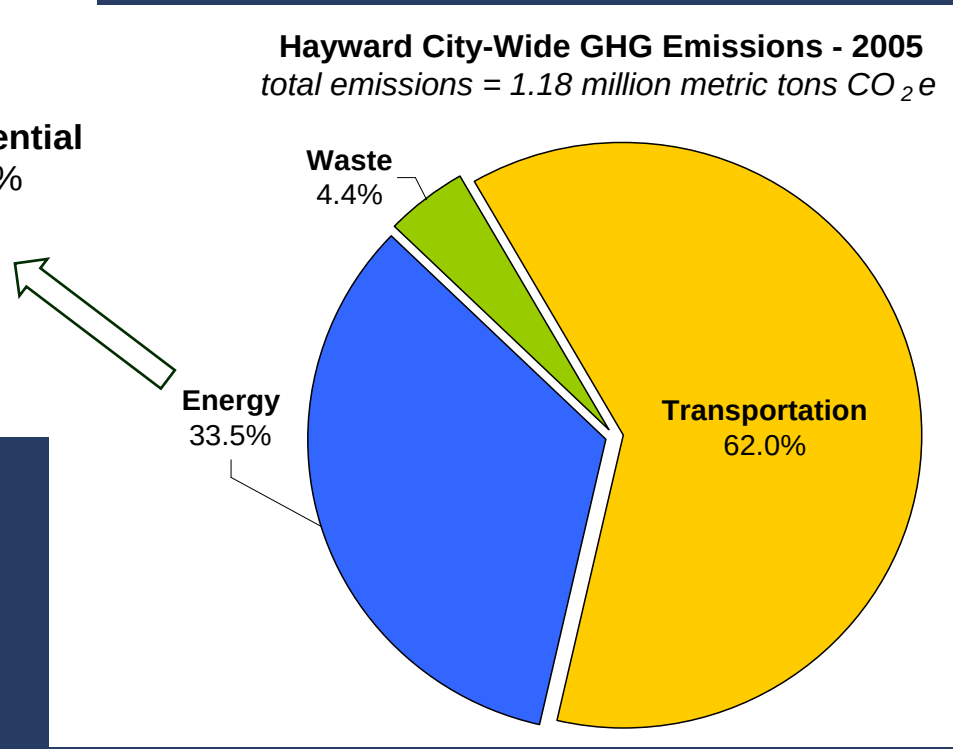
- Reduce GHG emissions to 1990 levels by 2020
- Reduce GHG emissions to 80% below 1990 levels by 2050

California Energy Commission- ***Long Term Energy Efficiency Strategic Plan***

- Reduce energy consumption in existing homes by
  - 20% by 2015
  - 40% by 2020
- Recommends that local governments adopt RECOs

Greenhouse Gas Emissions from Hayward's Buildings



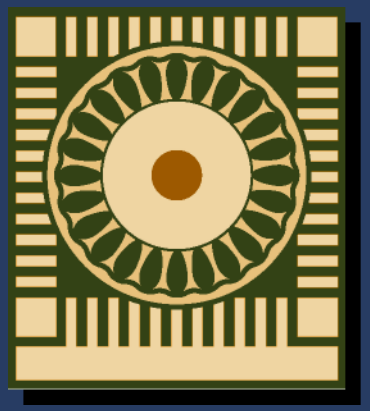


RECOs in Other Cities and Counties

- Berkeley, CA
- Boulder, CO
- Burlington, VT
- Marin County, CA
- Palo Alto, CA
- Rohnert Park, CA
- Roseville, CA
- San Francisco County, CA

Ordinance Elements

- Triggers
- Potential for Energy Savings
- Retrofit Measures
- Incentives



Triggers

- Remodels
- Point of Sale
- Date Certain

Triggers - Remodels (including Additions)

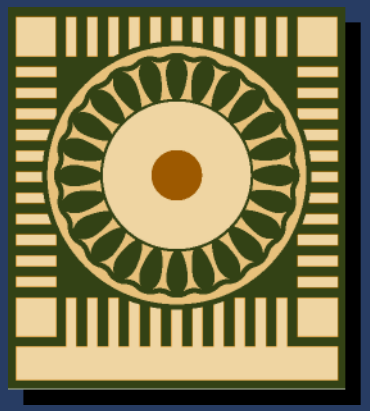
- Remodel and addition projects that exceed $50,000
- Used alone or in combination with other triggers in most RECOs
- Clearly defined event: building permit
- Cost of energy retrofits may be considered reasonable vs. other expenditures

Triggers - Point of Sale

- Compliance by seller or buyer
- If buyer, could be completed within “x” months of sale (e.g., 24 months)
- Clearly defined event: transfer of ownership
- Used in a few RECOs including the Cities of Berkeley, Roseville, and San Francisco, California and Burlington, Vermont
- Cost may be considered reasonable vs. other costs associated with the sale and some remodeling by buyer

Triggers - Date Certain

- All dwelling units must have required measures installed by a fixed date (e.g., 2020)
- Large market penetration
- No clearly defined event: challenge for education, monitoring, and enforcement
- No existing RECO uses this trigger
- A large percentage of home owners may delay until the fixed date
- May be phased (require older homes first)



Retrofit Measures

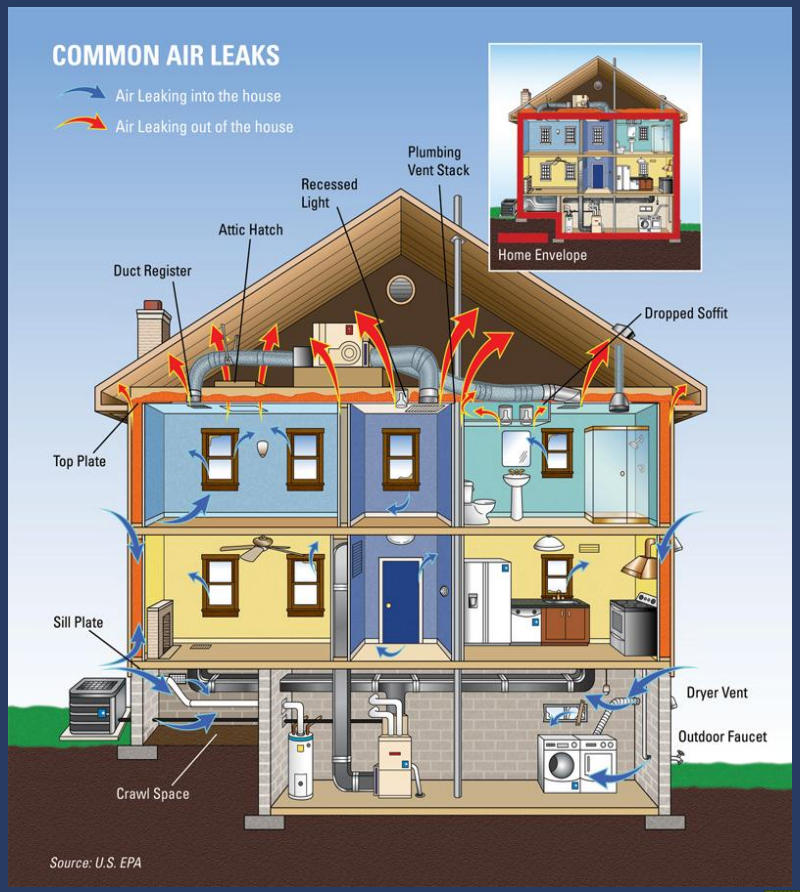
- Prescriptive approach
- Performance approach

Prescriptive Approach

A checklist of specific retrofit measures

A basic prescriptive "Package" could include the following measures:

- Air sealing
- Attic insulation (quality installation)
- Floor insulation
- Duct testing and sealing
- Insulation of water heater and pipes
- Combustion safety and CO alarm
- New water heater
- *Loading order: must do air sealing before insulating*



Performance Approach

Evaluation of overall home energy use to produce customized retrofit recommendations

- Results in a report with an efficiency score
- Basis for eligibility for incentives/rebates and financing
- Higher level of accuracy when estimated energy savings
- Cost of audit

Potential for Energy Savings

Comparison of Possible Triggers					
	2020 CAP Goal	2050 CAP Goal	Remodels	Point of Sale	Date Certain
Total Metric Tons /Year	**639**	**39,304**			
Percentage of Homes Subject to Ordinance	4.1%			25%	100%
Homes Improved by 2020	993			6,056	24,223
Compliance Rate	NA			90%	75%
Homes Improved by 2020	993		350	5,450	18,167
Tons of GHG Reduced/Dwelling Unit/Year [1]	0.649		0.649	0.649	0.649
Total Tons of GHG Reduced/Year	**645**	**39,304**	**227**	**3,537**	**11,791**
Number of Single-Family Homes in Hayward	24,223				
1 - Assumes Air Sealing, R38 in Attic, and Duct Sealing					

Comparison of Possible Triggers					
	2020 CAP Goal	2050 CAP Goal	Remodels	Point of Sale	Date Certain
Total Metric Tons /Year	**639**	**39,304**			
Percentage of Homes Subject to Ordinance	16.0%			25%	100%
Homes Improved by 2020	3,876			6,056	24,223
Compliance Rate	NA			90%	75%
Homes Improved by 2020	3,876		350	5,450	18,167
Tons of GHG Reduced/Dwelling Unit/Year [1]	0.173		0.173	0.173	0.173
Total Tons of GHG Reduced/Year	**670**	**39,304**	**61**	**943**	**3,143**
Number of Single-Family Homes in Hayward	24,223				
1 - Assumes Air Sealing Only					

Comparison of Possible Retrofit Measures			
Retrofit Measures	**Approx. Cost**	**Annual Gas Savings (Therms)**	**Annual GHG Reduction per unit in Metric Tons**
Duct Sealing	$ 1,030	48	0.259
Air Sealing	$ 1,400	32	0.173
Air Sealing + Duct Sealing	$ 2,440	76	0.408
Air Sealing + R-38 Attic	$ 2,830	82	0.439
Air Sealing + Duct Sealing + R-38 Attic	$ 3,860	121	0.649

Incentives

Federal Incentives - U.S. HOME STAR Program

Passed the U.S. Congress, but not funded yet

Prescriptive ("Silver Star") Path

- $1,000 to $1,500 rebate per measure ; $3,000 max or 50% of total costs

Performance ("Gold Star") Path

- Energy audit before work begins by a certified professional
- Test-out when retrofit is complete
- Homeowner receives $3,000 for estimated savings $\geq$ 20%; + $1,000 for each additional 5% savings

Utility Incentives - PG&E Residential Retrofit Incentive Program

Existing Rebates for individual measures

- $150 for insulating > 1,000 sf attic
- $100 for duct sealing
- Other rebates for new HVAC, appliances, etc.
- http://www.pge.com/myhome/saveenergymoney/rebates/

Whole House Retrofits

- Performance audit, minimum % energy use reduction
- Up to $3,500 for single family property owners
- Pending approval by the California Energy Commission

Utility Incentives – PG&E Energy Partners Program

Income Qualified

- No-cost home energy improvements (house, apartment or mobile home)
- Attic insulation, weather stripping, caulking, energy-efficient lighting and refrigerators, window repair and more
- Furnace and water heater repair and replacement available to qualifying home owners

http://www.pge.com/myhome/customerservice/financialassistance/energypartners/

Hayward RECO process

- July 28, 2009 - Climate Action Plan adopted by Council
- Feb 3, 2010 –Introduction of RECO to Council Sustainability Committee
- June 2, 2010 –Overview of elements of RECO to Committee
- Summer 2010 –Cost effectiveness research of possible retrofit measures
- August 11, 2010 – First RECO Public Meeting
- September 1, 2010 – <u>NEXT MEETING!</u>

Discussion